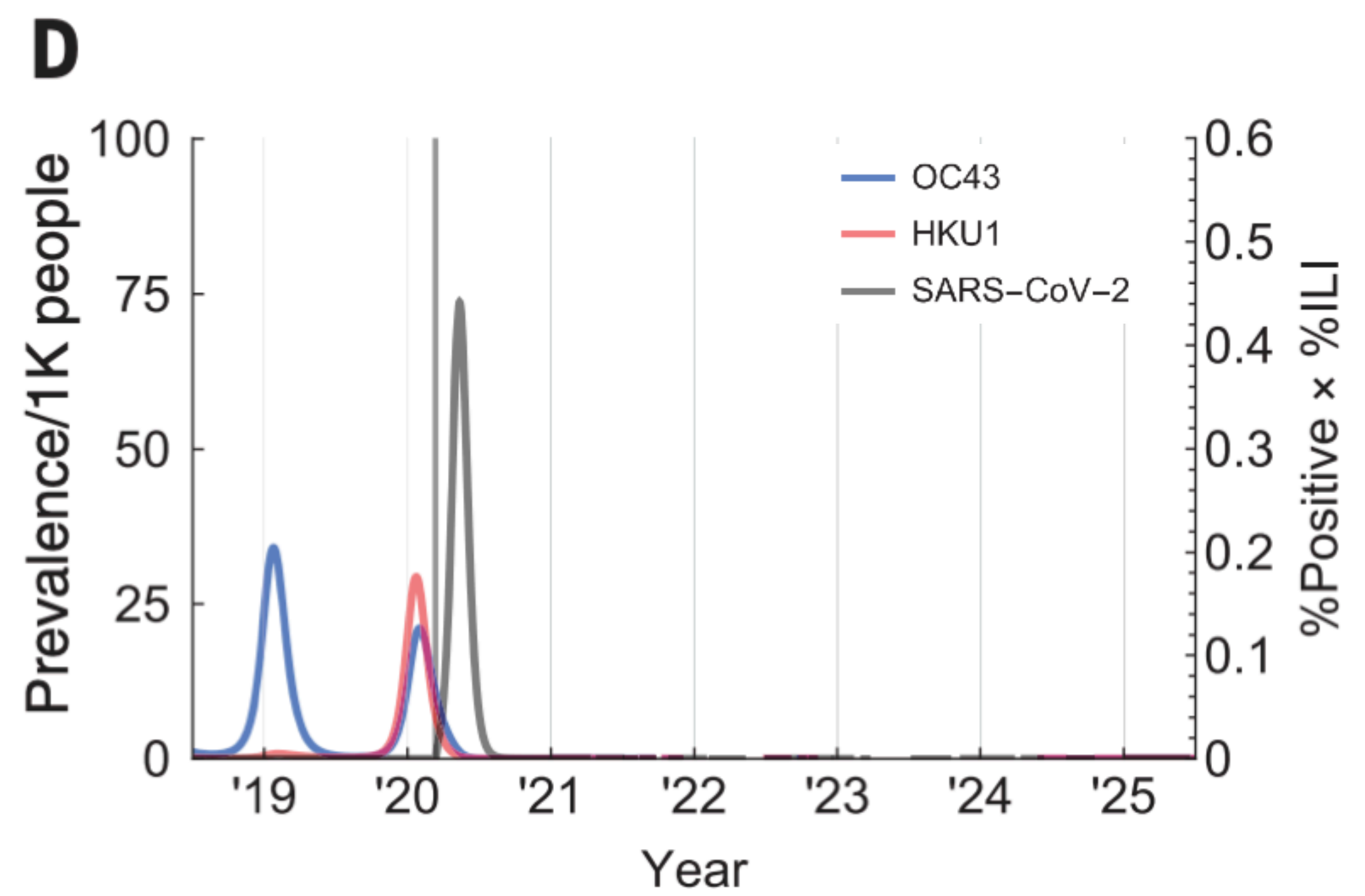
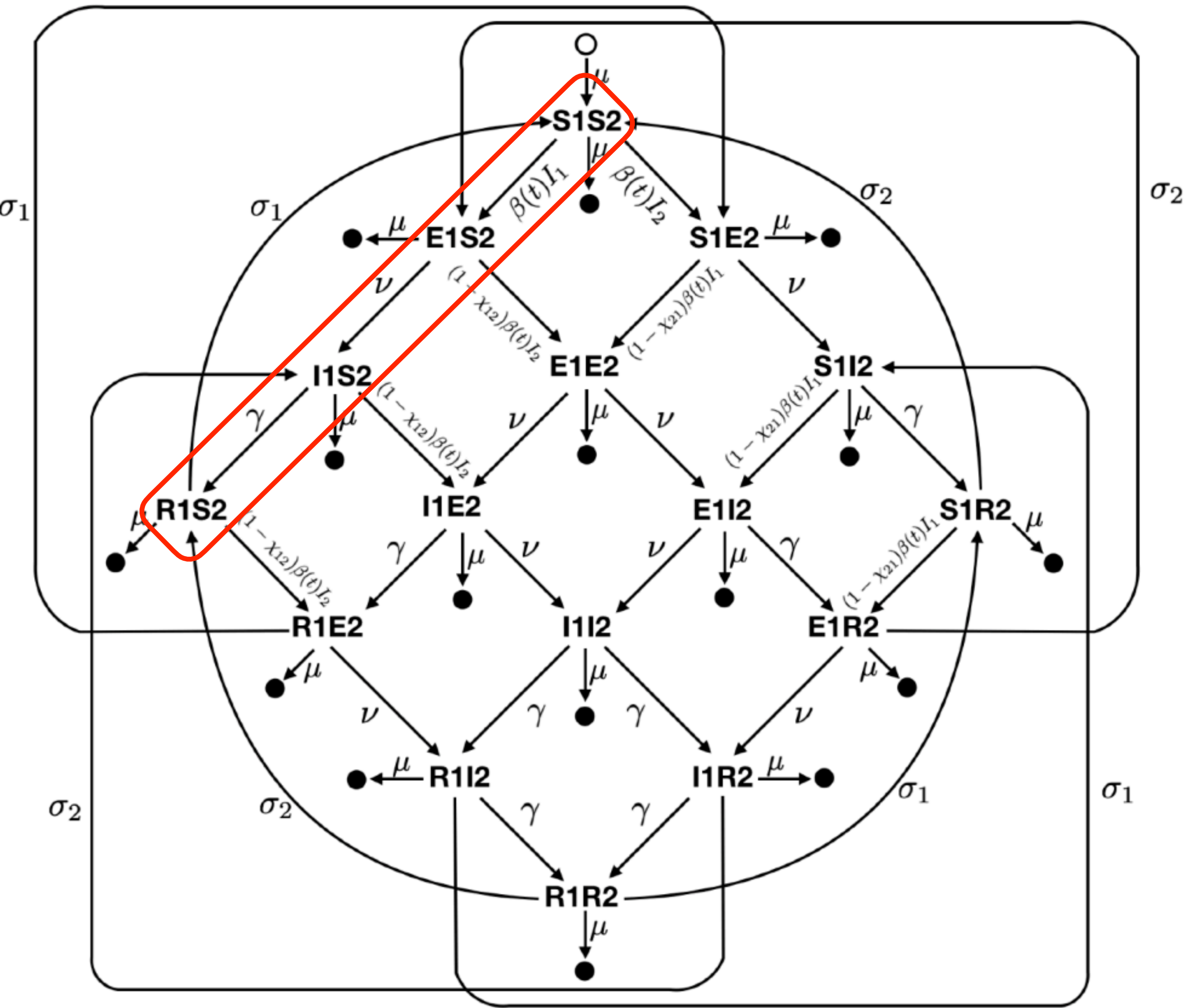
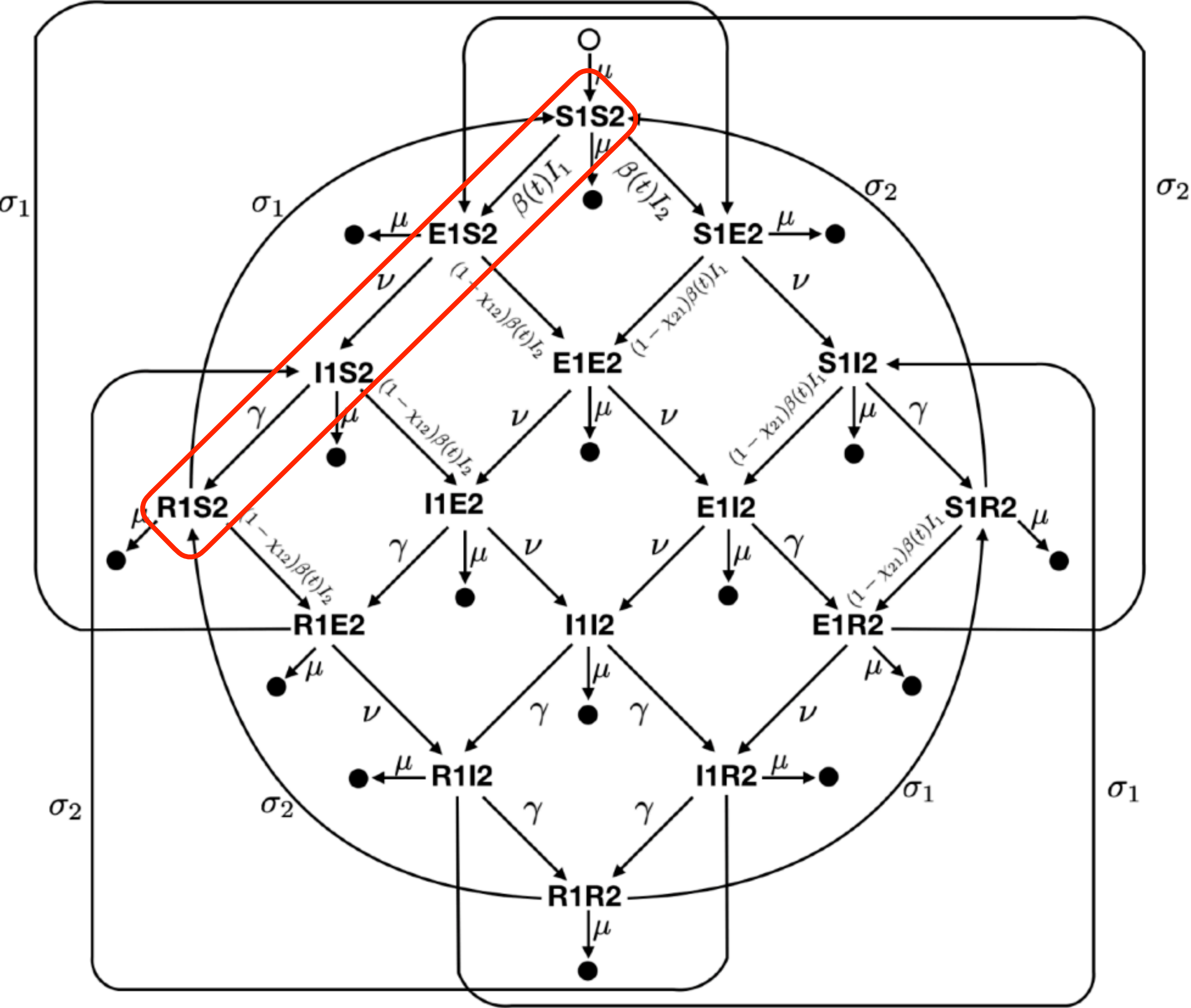


# The full model

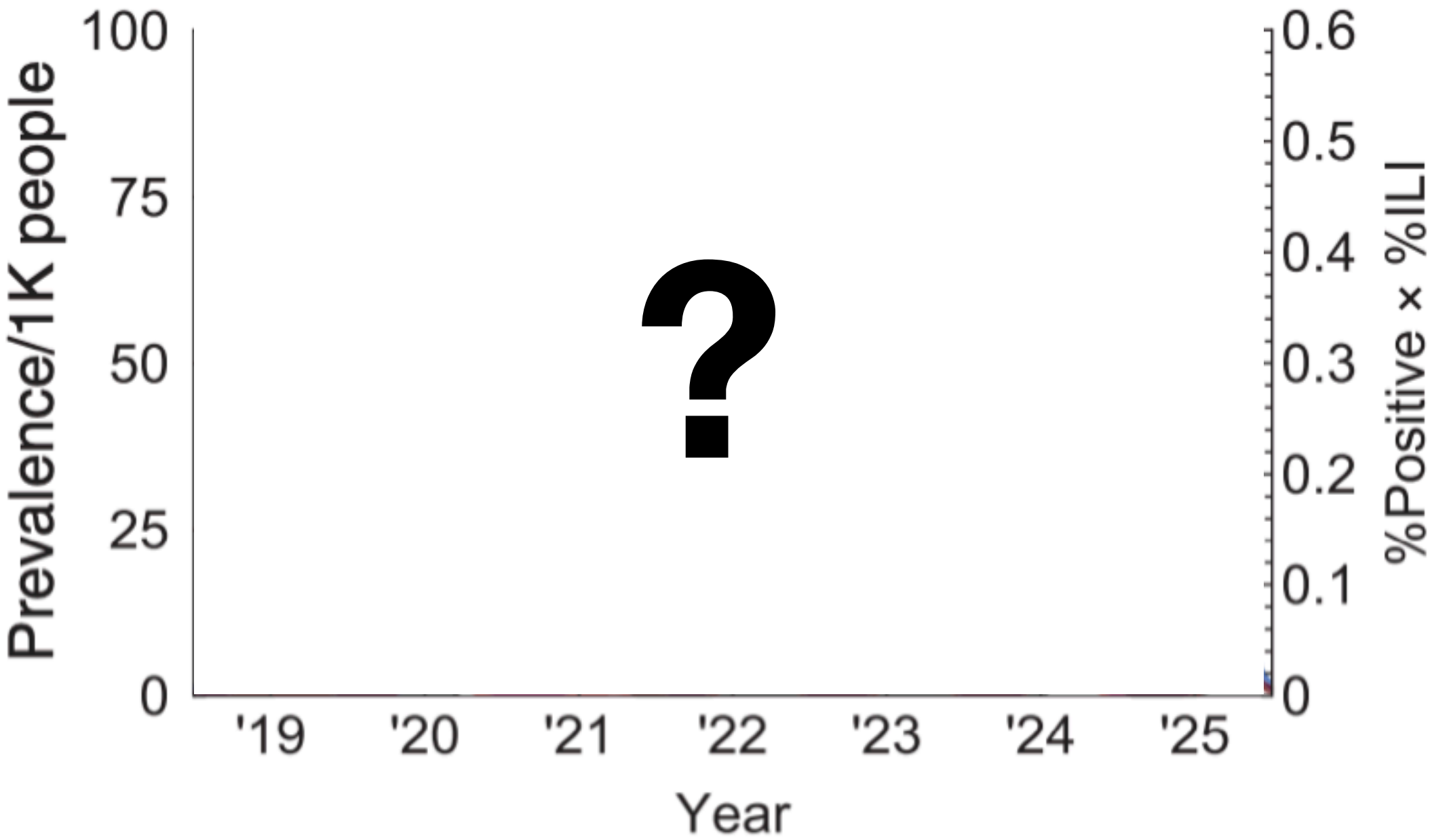


Long-term immunity ( $1/\sigma = \text{infinity}$ ) could make SARS-CoV-2, and maybe even the other coronaviruses, die out

# The full model



**F**



Intermediate-length immunity ( $1/\sigma = 104$  weeks) and a bit of cross-immunity ( $\chi = 0.3$ )